EFFECTS OF PRICE REGULATION ON COMPANY PERFORMANCE OF OIL MARKETING COMPANIES IN KENYA

CASE STUDY: TOTAL KENYA LIMITED

BY

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UNITED STATES INTERNATIONAL UNIVERSITY AFRICA

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By

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A Project Report Submitted to the Chandaria School of Business in Partial Fulfillment of the Requirement for the Degree of Masters in Business Administration (MBA)

UNITED STATES INTERNATIONAL UNIVERSITY AFRICA

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STUDENT’S DECLARATION

I, the undersigned, declare that this is my original work and has not been submitted to any other college, institution or university other than the United States International University in Nairobi for academic credit.

Signed: __________________________  Date: _____________________

STELLA NKATHA KIMATHI (622876)

This project has been presented for examination with my approval as the appointed supervisor.

Signed: __________________________  Date: _____________________

Prof. Francis Gatumo

Signed: __________________________  Date: _____________________

Dean, Chandaria School of Business.
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ABSTRACT

Kenya imports all its fuel through the Open Tender System, whereby petroleum products are purchased by a single company for the entire market on the basis of a public tender and shared among all marketing companies in proportion to their share of the market. Over the years, fuel price dynamics became relatively volatile which resulted into the regulation of fuel through the ERC in December 2010. (Kojima, 2010). The purpose of this research study was to evaluate the effect of price regulation by the Energy Regulatory Commission on the company performance of Oil Marketing Companies in Kenya, with Total Kenya Limited as the case study. It was guided by the following research questions: Does price regulation affect the return on equity of oil marketing companies in Kenya? How has price regulation influenced the earnings per share within the oil marketing companies in Kenya? Finally, what impact does price regulation have on the sales trend of oil marketing companies in Kenya?

This study adopted a causal research design. Causal studies are concerned with learning how one variable produces changes in another. The study sought to establish and explain the relationships among variables, in this case, price regulation on petroleum products against company performance of oil marketing companies. The audited financial statements and management reports for the period between 2008 to 2012 were used for collection of data. The data was analyzed by use of a computer Statistical Package for Social Science (SPSS) and Microsoft office 2007 application and presented in graphs and tables.

The study findings revealed that the re-introduction of oil price regulation had a negative impact on both return on equity and earnings per share of petroleum firms in Kenya. The company performance as measured by EPS and ROE was better/ higher in the period preceding price regulation. Thus a negative effect on company performance.

However, there was a positive impact on sales after the re-introduction of price regulation in the petroleum industry. The company performance as measured by sales was lower in the period preceding price regulation. Thus a positive effect on company performance using the sales variable.
The study concluded that there was an inverse relationship between price regulation and both return on equity and earnings per share but on the other hand, there was a positive relationship between price regulation and sales growth.

The study recommends refinement of the ERC pricing formula to ensure that it accommodates and addresses the concerns raised by the major stakeholders in the industry to ensure protection of the oil sector’s profit margins and subsequently enhance company performance. Further, Total Kenya should strive to operate efficiently by minimizing their operating expenditures and direct cost so that an increase in Sales would automatically translate to an increase in profitability (measured in terms of ROE and EPS).
DEDICATION

I dedicate this research project to my family and friends.
ACKNOWLEDGEMENT

My sincere gratitude goes to God for giving me the wisdom, knowledge, strength and good health throughout my entire Masters programme.

Secondly, special thanks go to my Supervisor, Professor Francis Gatumo, for providing invaluable guidance throughout this study. His immense knowledge on the subject matter enabled me complete this research project.

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# TABLE OF CONTENTS

STUDENT'S DECLARATION .......................................................................................... ii
COPYRIGHT.................................................................................................................. iii
ABSTRACT...................................................................................................................... iv
DEDICATION .................................................................................................................... vi
ACKNOWLEDGEMENT ..................................................................................................... vii
LIST OF TABLES .............................................................................................................. x
LIST OF FIGURES ............................................................................................................ xi

## CHAPTER ONE............................................................................................................ 1

1.0 INTRODUCTION ....................................................................................................... 1
1.1 Background of the Study .......................................................................................... 1
1.2 Problem Statement .................................................................................................. 5
1.3 Purpose of the Study ............................................................................................... 6
1.4 Research Questions ................................................................................................. 6
1.5 Significance of the Study ......................................................................................... 6
1.6 Scope of the Study ................................................................................................... 7
1.7 Definition of Terms .................................................................................................. 8
1.8 Chapter Summary .................................................................................................... 9

## CHAPTER TWO .......................................................................................................... 11

2.0 LITERATURE REVIEW ........................................................................................... 11
2.1 Introduction ............................................................................................................. 11
2.2 Effects of Price Regulation on the Return on Equity of Oil Marketing Companies .... 11
2.3 Effect of price regulation on Earing per share within Oil Marketing Companies ....... 16
2.4 Effects of price regulation on the Sales Growth of Oil Marketing Companies ......... 20
2.5 Chapter Summary .................................................................................................. 26

## CHAPTER THREE ..................................................................................................... 26

3.0 RESEARCH METHODOLOGY ............................................................................... 26
3.1 Introduction ............................................................................................................. 26
3.2 Research Design .................................................................................................... 26
3.3 Population and sampling design ............................................................................ 26
3.4 Data Collection Methods ....................................................................................... 28
CHAPTER THREE

3.1 Identifying the area of Study

3.2 Literature Review

3.3 Methodology

3.4 Data Collection

3.5 Research Procedures ..............................................................................................................29

3.6 Data Analysis Methods .......................................................................................................29

3.7 Chapter Summary ..............................................................................................................30

CHAPTER FOUR

4.0 RESULTS AND FINDINGS. ...............................................................................................31

4.1 Introduction .......................................................................................................................31

4.2 General Information .........................................................................................................31

4.3 Price regulation and effect on Return on Equity ...............................................................31

4.4 Price regulation and effect on Earnings per share ..........................................................32

4.5 Price regulation and effect on Sales growth ....................................................................33

4.6 Descriptive Statistics Analysis .........................................................................................35

4.7 Chapter Summary ............................................................................................................38

CHAPTER FIVE

5.0 SUMMARY, DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS ...........38

5.1 Introduction .......................................................................................................................39

5.2 Summary ..........................................................................................................................39

5.3 Discussion ........................................................................................................................41

5.4 Conclusion .........................................................................................................................46

5.5 Recommendations ..........................................................................................................47

REFERENCES ..........................................................................................................................50

Appendix I: Request Letter from U.S.I.U-Africa ..................................................................59

Appendix II: Data tabulation guide using extracts of Financial Statements ......................60
LIST OF FIGURES

Figure 4.1: Trend analysis of Return on Equity for 2008 to 2012................................. 26
Figure 4.2: Trend analysis of Earnings per share for 2008 to 2012………………………27
Figure 4.3: Trend analysis of Sales for 2008 to 2012............................................. 28
CHAPTER ONE

1.0 INTRODUCTION

1.1 Background of the Study

Price control is a government oversight or direct government control over the price charged in a market, especially by a firm with market control (Economic, 2011). Price regulation may be done by a government agency, legal statute or regulatory authority. Economists believe that market prices should, as a general rule, be left alone by the government. Goods and services are allocated to those who value them most, but competition ensures that consumers face the lowest possible prices. Government intervention, however, might improve overall economic efficiency if prices do not reflect total costs or if the market in question is not competitive (Timmer, 1989).

Theoretically, oil prices should be a function of supply and demand. When supply and demand increase, prices should drop and vice versa. But the reality is different. Oil which is the preferred source of energy has a complicated pricing model. Demand and supply are only part of the complex equation that has generous elements of geopolitics and environmental concerns (Kilian, 2006).

In many countries of the world, the pricing of petroleum products is regulated in one form or the other. There are a number of reasons for this. First, the petroleum industry globally is not a competitive one. Rather, the industry is oligopolistic with a few major companies dominating the industry. Under such a market structure, some form of price regulation becomes necessary to protect consumers against oligopolistic and monopolistic exploitation. A second reason why petroleum products prices are widely regulated has to do with the nature of the products themselves and the important role they play in the economy and the lives of citizens. An unregulated price regime could lead to very high prices of the products, which the economy and, particularly, the poor may not be able to bear. A further reason is to avoid extreme volatilities in the prices of petroleum products. These are thought not to be in the interest of the economy and consumers. Price regulation may also be instituted to ensure uniformity of prices across a country or region ((Porter, 2011).
At an international level, OPEC controls oil prices through its pricing-over-volume strategy. According to Foreign Affairs magazine, the oil embargo (prohibition of the trade of petroleum from one country to another) shifted the structure of the oil market from a buyer's to a seller's market. The cartel derives its pricing power from two trends: absence of sources of energy and a lack of viable economic alternatives in the energy industry. It holds three-quarters of the world's conventional oil reserves and has the world's lowest barrel production costs. This enables it to have a wide-ranging influence over oil prices. Thus, when there is a glut of oil in the world, OPEC cuts back on its production quotas. When there is less oil, it increases oil prices to maintain stable levels of production. A number of world events have helped OPEC maintain control over oil prices, such as the disintegration of the Soviet Union in 1991; the resulting economic tumult disrupted Russia's production for several years. The Asian economic crisis had the opposite effect: it reduced demand. In both instances, OPEC maintained a constant rate of oil production (Sharma, 2015).

Regions that hold pricing power over oil control vital levers of the world's economy. The United States controlled oil prices for a majority of the previous century, only to cede it to the OPEC countries in the 1970s. Recent events, however, may end up with the pricing power swinging back towards the United States and Western oil companies.

Critics of price regulation like Rockoff (2008) hold the view that price controls do not accomplish what they were intended to do and can generally be avoided. Martin (2002), on his part, states that the primary criticism leveled against price controls is that by keeping prices artificially low, demand is increased to the point where supply cannot keep up, leading to shortages in the price-controlled product. The Nobel Prize Winner, Milton Friedman, supported this position when he stated "We economists don't know much, but we do know how to create a shortage. If you want to create a shortage of tomatoes, for example, just pass a law that retailers can't sell tomatoes for more than two cents per pound. Instantly you'll have a tomato shortage. It's the same with oil or gas (Sowell, 2008)". Martin (2002) concluded that the created shortages lead to black markets where prices for the same good exceed those of an uncontrolled market. Martin further pointed out that once controls were removed, prices would immediately increase, which could temporarily shock the economic system. At the global level, these views expressed by various economists tended to
discourage price regulation and encourage that market forces of supply and demand should be left to determine prices. These views were significant to this study since at the global level, OPEC efforts to control prices of oil had failed as market factors were the main determinant of the world oil prices. It is therefore clear that opinion is divided on what causes instability of oil prices whether under regulated or deregulated oil pricing mechanisms.

At a regional level, there are several countries that have price regulation whereas there are others that allow the market forces to dictate the fuel prices. For example, in Tanzania, The Energy and Water Utility Regulatory Authority regulates the price of fuel, In Rwanda, regulation is conducted by the Rwanda Utilities Regulatory Authority. Uganda on the other hand, unlike its Eastern African colleagues, does not have a regulatory agency; therefore, the free market largely dictates prices. In Ghana, oil is regulated through the National Petroleum Authority (NPA) while in South Africa, the South African government regulates the retail price of petrol however, it doesn’t have complete control over diesel prices (Ventures Africa, 2015).

East African economies depend on crude oil and refined oil products mainly from the Middle East region, with few multinational firms dominating the downstream business. In Kenya the oil sector operated under the Free Market System, whereby market forces of demand and supply determined the price. Although oil prices are affected by mostly external factors, it was felt that Cartels and monopoly tendency distorted market forces to ensure high prices prevailed. Due to public outcry, the government was forced to intervene through price regulatory mechanism by introducing maximum retail price to be charged by marketing firms on certain oil products in December 2010. This effectively ushered into the sector Controlled Market System by the government (Katisya, 2009).

Price control was adopted in Kenya in order to increase consumer welfare by putting a cap on the maximum price that can be charged on petroleum products and in turn lowering supplier profits. This was the main motivation behind price control (Wanjiku, 2011). Oil price controls in Kenya were introduced to ensure oil price stability due to the constant public outcry demonstrated each month after oil price reviews. (Wanjiku, 2011). This has seen fuel retailing at similar prices across all petrol stations regardless of the petrol company. Consumers therefore pay the same price for fuel in any petrol station (Ombungu, 2011).
is therefore important to understand how firms compete in a price regulated market in terms of the strategies that they adopt and how the performance of these firms is affected. In Kenya, petroleum fuel pump prices are regulated through price capping. Super and Regular petrol as well as automotive diesel and kerosene are the better known fuel brands whose prices are capped this way. In this regulation, the prices are reviewed on a monthly basis by the Energy Regulatory Commission (ERC). This price control continues to be the subject of debate, with different stakeholders arguing for or against it (Obiero, 2012).

According to a press statement released in 2010, The Energy Regulatory Commission (ERC) had noted the concerns being expressed by consumers in regard to the then current levels of retail prices of petroleum products. Various stakeholders had expressed strong views that the current retail prices were too high and that there was no justification for the recent increases. The mandate of the Energy Regulatory Commission includes both technical and economic regulation of the energy sector. Its functions include, among others, the monitoring, ensuring implementation of, and the observance of the principles of fair competition and; the protection of the interests of consumers and investors in the energy sector. With extensive stakeholder consultations, as required by the Energy Act, ERC drafted regulations for setting the maximum pump prices of three petroleum products namely Petrol, Automotive Diesel and Kerosene. The Commission approved and submitted to the Minister the Proposed Regulations on Petroleum Retail Pricing in April 2009. The proposed regulations include a formula for capping the maximum pump prices after incorporating all prudently incurred cost inputs. The main factors which affected the level of pump prices in Kenya were the international costs of both crude oil and refined petroleum products, the exchange rate of the Kenya shilling to the dollar and various other in-country costs. These proposed regulations were gazetted by the Government in 2010.

Petroleum products are important in driving the economies of all countries in the world but despite this, petroleum product prices have been going through fluctuations and instability, often affecting the efficiency of the same in propelling growth (Kojima, 2009). The importance of prices of oil products to the economy cannot be emphasized. Increases in prices of oil lead to general increases in prices of other essential commodities and services (Mecheo and Omiti, 2003). Oil price volatility surpassed most other raw materials' price
volatility in the mid-1980s and this pattern continues today. Oil price controls in Kenya were introduced to ensure oil price stability. This was to put some level of control and sanity in the pricing of petroleum products with the aim of protecting the consumer.

Instability of pump prices of oil products forced the Government of Kenya to re-introduce price regulation in December 2010. Price regulation refers to government interventions aimed at controlling the maximum prices of a certain product. If there is a national oil company or an oil company with some state involvement that is also a price-setter (because it controls a large share of the market), the government may send signals to the company to keep prices low (Kojima, 2009). Prior to re-introduction of price regulation, Kenya had tried to use the National Oil Company of Kenya (NOCK) to stabilize prices of oil products, without much success.

The regulation meant that even the oil marketers margins were also regulated unlike before where these firms determined what margins they were making. This move meant that the marketers had to make some changes that would ensure that despite the controlled margin they were still justified to remain in business from a margin perspective (Katisya, 2009).

1.2 Problem Statement

Kenya experienced sharp increase in prices of petroleum products between 2007 and 2010. It was observed oil firms were taking advantage of international prices changes to exploit the public. Due to public outcry and the need to protect consumers, the government introduced price controls on pump prices in December 2010.

The proposed pump price regulations attracted a lot of resistance from oil marketers who would prefer to have the market forces and competition control pricing. These regulations were in the view of economists as taking the country back to the pre-1994 days before the industry was liberalized (Mwendia, 2013). An unwanted result of the price regulation move is that petroleum product prices in rural areas now cost more. Before capping petrol prices, these prices were based on demand with prices being higher in major towns despite the cost of increased transport to the more rural towns.

Of the various researches that have been done by Mwendia (2013), Khamala (2013) and Langat & Manyasa (2012) none of these studies were directed towards evaluating the impact
of price regulation on company performance of oil marketing companies in Kenya. This study therefore sought to provide findings for this gap by exploring how the re-introduction of price regulation in the oil industry had impacted the return on equity of oil marketing companies, the earnings per share of the oil marketing companies and finally the impact that price regulation had on the sales growth of these companies. This study was therefore conducted to fill this research gap with Total Kenya limited as the case study.

1.3 Purpose of the Study

The purpose of the study was to evaluate the effect of price regulation by the Energy Regulatory Commission on the company performance of oil marketing companies in Kenya, with Total Kenya Ltd as the case study.

1.4 Research Questions

The research questions for this study were:

1.4.1: Does price regulation affect the return on equity of oil marketing companies in Kenya?
1.4.2: How has price regulation influenced the earnings per share within the oil marketing companies in Kenya?
1.4.3: What impact does price regulation have on the sales trend of oil marketing companies in Kenya?

1.5 Significance of the Study

This study will be significant to a variety of stakeholders in society.

1.5.1 Total Kenya Limited

To Total Kenya Limited, the findings of this research will enable the company to strive for ways to operate more efficiently by minimizing their operating expenditures so that an increase in sales would automatically translate to an increase in Return on Equity and Earnings per Share. This would be for example through reduction of finance costs and also reduction of other operating expenses.
1.5.2 Energy Regulatory Commission

The government, through its governing body in the oil industry the ERC, will be able to use the findings from this research to evaluate the effect that price regulation has on the company performance of oil marketing companies. The findings can be used to improve the current regulatory framework as well as formulate and implement new price regulation policies.

1.5.3 Other Oil Marketing Companies

To other oil marketing companies, this study will provide insight to them on how despite price regulation, Total Kenya has managed to continuously grow sales and also maintain the highest market share in the industry throughout the years. Since the company publishes its financial accounts, other oil marketing companies can study the company’s statements and auditors reports and try to benchmark the company.

1.5.4 Researchers and Academia

To other researchers and academia, this research will further contribute to the existing literature on price regulation within the oil market and how the various OMC’s have found new strategies to continue operating profitably with this regulation in place. The findings of these study will go towards filling an existing information gap in regard to price control and company performance. Personally as a student, this study will enlighten me as a researcher to further understand that price is not the only influence on company performance.

1.6 Scope of the Study

The target population for this study constituted the biggest oil company in Kenya, Total Kenya that has a leading market share within the industry of about 18% (Petroleum Insight Magazine, (2016). The study analyzed the financial statements of this company over a period 5 between the years 2008 to 2012. This was 2 years prior and 2 years after the price regulation was reintroduced into the Kenyan Oil industry in December 2010.
1.7 Definition of Terms

1.7.1 Oil Marketing Company

An Oil marketing company also known as OMC refers to any person, firm or company engaged in sale of petroleum products to dealers or consumers in bulk or retail. In Kenya, OMC’s are responsible for importing petroleum products and distributing them (Livohi, 2012).

1.7.2 Energy Regulation Commission

The Energy Regulatory Commission (ERC) was established under the Energy Act, 2006, with several objectives among them to "regulate the electrical energy, petroleum and related products, renewable energy and other forms of energy". ERC is responsible in setting the maximum wholesale and retail prices of petroleum products at a wholesale depot or retail dispensing site. The prices are usually set for a month, running from 15th to 14th of the next month (PIEA magazine, 2016).

1.7.3 Petroleum products

This refers to crude oil or any product manufactured out of crude oil or from another petroleum product including Aviation Turbine Oil, Motor Spirit, High Speed Diesel, Liquefied Petroleum Gas, Superior Kerosene Oil (PIEA magazine, 2016).

1.7.4 Return on Equity

Return on equity (ROE) is the amount of net income returned as a percentage of shareholders’ equity. It measures a corporation's profitability by revealing how much profit a company generates with the money shareholders have invested (Khatab et al, 2011).

1.7.5 Earnings per share

Earnings per share (EPS) is the portion of a company's profit allocated to each outstanding share of common stock. Earnings per share serves as an indicator of a company's profitability. However, data sources sometimes simplify the calculation by using
the number of shares outstanding at the end of the period. EPS is calculated as: \( EPS = \frac{\text{net income}}{\text{average outstanding common shares}} \) (Marr, 2012).

1.7.6 Sales growth

The amount by which the average sales volume of a company's products or services has grown, typically from year to year. Sales Growth metrics measure the pace at which your organization's sales revenue is increasing or decreasing. Sales growth metric is used to provide executives and sales directors with an assessment of the sales organization's performance (Ambler, 2003).

1.7.7 Organization of the Petroleum Exporting Countries

The Organization of the Petroleum Exporting Countries (OPEC) was founded in the year 1960 by Iran, Iraq, Kuwait, Saudi Arabia and Venezuela. OPEC is an intergovernmental organization. The sole aim of the organization is to maintain stability in the oil prices through efficient, economic and regular supply of petroleum (Squalli, 2007).

1.7.8 Price Regulation

Price regulation refers to the policy of setting prices by a government agency, legal statute or regulatory authority. Under this policy, minimum and/or maximum prices may be set (Khemani et al., 2003).

1.7.9 Company Performance

Corporate or company performance is a composite assessment of how well an organization executes on its most important parameters, typically financial, market and shareholder performance (Brammer et al., 2006).

1.8 Chapter Summary

Chapter one presents the background information to the research problem, identifies the problem statement, states the purpose of the study and lists the research questions addressed in the research project. It also presents the significance, scope and definition of terms used.
Chapter two presents the literature review. Chapter three presents the research methodology. Chapter four presents the results and findings of the study. Chapter five presents the summary, discussions, conclusions and recommendations of the study.
CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction

This chapter covers literature review of the existing research literature on the study based on the research questions. The first research question was the impact of price regulation on the return on equity of oil marketing companies in Kenya, the second research question was the effect that price regulation has on the earnings per share of an oil marketing company and finally research question three looked at how price regulation impacts sales of oil marketing companies. The chapter summary will be provided at the end of this literature review.

2.2 Effects of Price Regulation on the Return on Equity of Oil Marketing Companies

Return on equity (ROE) is the amount of net income returned as a percentage of shareholders’ equity. It measures a corporation's profitability by revealing how much profit a company generates with the money shareholders have invested (Khatab et al, 2011).

Economists believe that market prices should, as a general rule, should be left alone by government. Prices in market economies are established by the interplay of supply and demand. Goods and services are allocated to those who value them most, but competition ensures that consumers face the lowest possible prices. Information regarding relative scarcity or plenty is communicated quickly and unambiguously to both buyers and sellers. High prices encourage conservation and new supply (Krueger, 2005). In Kenya, when the regulation of oil prices was re-introduced in 2010, most OMC’s felt that their businesses would no longer be as profitable if their margins were controlled by government.

2.2.1 Market Structure

Market structure refers to the interconnected characteristics of a market, such as the number and relative strength of buyers and sellers and degree of collusion among them, level and forms of competition, extent of product differentiation, and ease of entry into and exit from the market (Burt, 2009).
Carranza et al., (2009) studied the effect of price regulations on the organization and performance of gasoline market in Quebec and Ontario. The goal of the research was to demonstrate that price regulations can have important unintended consequences on prices and productivity in the longer run by distorting the structure of markets. They argued in particular that price control policies crowded markets hence creating an endogenous barrier to entry for low-cost retailers. The survey offered accurate measures of sales and station characteristics, since each site was physically visited at the end of the survey period, and volume sold was measured by reading the pumps' meters. The period studied spanned eleven years between 1991 and 2001 and included all 1601 stations in fourteen selected cities of Quebec and Ontario. The data contained detailed information on individual stations' sales volume, posted price, and characteristics and allowed them to study the effect of price control on station behavior at the local-market level. The study was based on a sample of gasoline stations before and after the implementation of price control policy. For analysis they took the sales volume data collected during the third quarter of each year, and price and station characteristics collected at the end of the same quarter each year. They run regression analysis on a set of variables that measure the endogenous structure of the market, before and after the introduction of the policy. They showed that as a result of the price regulation policy, prices were lower and competition was higher. The results therefore highlighted that price regulation affects market structure and can therefore have negative consequences on profitability.

2.2.2 Increased Competition
According to Mills (2002), Competition refers to rivalry in which every seller tries to get what other sellers are seeking at the same time: sales, profit, and market share by offering the best practicable combination of price, quality, and service. Where the market information flows freely, competition plays a regulatory function in balancing demand and supply. According to Bator (1958), the level and nature of competition in the industry determined the efficiency of production and delivery of products to customers, the quality of products and the degree of innovation in the sector. Excessive price competition reduced the profitability of the company while low price competition enabled oil companies adjust prices in line with their operational strategies. Movement in international oil prices and exchange rates between local currency and the American dollar impacted on the product cost. The
reflection of these costs on the prices of the product determined the level at which oil companies were able to pass them to consumers (Aress, 2011).

African globe (2011) further conducted a research in Kenya in the year 2011. Data was collected from the major oil marketing companies in Kenya. The study showed a reduction in profit margins, increased competition as a result of the official price caps. This resulted to a number of big oil marketing firms moving out of Africa as they shifted focus to the more lucrative exploration and production activities. Anglo-Dutch giant Shell earlier in that year concluded a $1 billion divestiture deal from its 21 markets in Africa, becoming the latest oil marketer to exit Kenya, following in the footsteps of five international majors that had left the country in the past decade over dwindling margins. Other companies that exited the Kenyan oil market were Caltex (Chevron), Beyond Petroleum plc. (BP), Mobil, Agip and Esso. Shell withdrew from all African operating markets except Egypt and South Africa.

2.2.3 Research and Development

Research and Development (R&D) refers to the investigative activities a business conducts to improve existing products and procedures or to lead to the development of new products and procedures (Chesbrough, 2006).

Golec et al., (2010) studied the effects of European pharmaceutical price regulation to firm return on equity and spending on research and development. This was a comparative study between a price regulated market and a non-regulated market. The research used geographical 10 sales data as contained in the financial statements for 19 years up to the year 2004. They carried out a cross-sectional relation between EU price regulations and R&D spending at the firm-level. Real pharmaceutical prices were used as a proxy for the effects of price regulations and political pressure in the U.S. and EU over time. Regression analysis was used to measure the sensitivity of a firm’s sales to U.S. and EU price indices, respectively. Compared to EU firms, U.S. firms were more profitable, earned higher stock returns, and spent more on research and development (R&D). The study showed how tight EU pharmaceutical price controls led to lower return on equity, lower stock returns, and reduced spending on research and development by EU firms compared to U.S. firms. The study concluded that firms whose sales are more closely related to EU real pharmaceutical
prices spent less on research and development, were less profitable and earned smaller stock returns. Some of the limitations to the study were; data used included only publicly reported data, firms reported total R&D spending, not spending by geographic area and total R&D spending could include R&D spent by non-pharmaceutical divisions of the firm.

According to Laffont, (2000), he carried out a study on telecommunication competition and found out that imposing price controls in the U.S. reduced the firm’s value, R&D, the flow of new drugs, and the net present value of consumer welfare and when price controls are removed, there is an increase in firms value, R&D, the flow of new drugs, and consumer welfare globally. Gilbert et al. (2004), highlighted that price controls encouraged firms to locate their development activities elsewhere and that the resulting losses of jobs, businesses, and tax revenues made it slightly privately optimal for European Union countries to abandon price controls.

2.2.4 Gross Profit Margin

According to Pilateris et al. (2003), Gross profit margin is a financial metric used to assess a company's financial health and business model by revealing the proportion of money left over from revenues after accounting for the cost of goods sold. In other words, it measures how efficiently a company uses its materials and labor to produce and sell products profitably.

Wabobwa (2011) studied the impact of oil price regulation on financial performance of National Oil Corporation of Kenya (NOCK). The research covered a period of twelve months between the year July 2010 and June 2012. The study used data from published audited semiannual reports. The performance of the company was analyzed using ratios for the period before and after re-introduction of price regulation. Data was analyzed using Microsoft excel and presented using tables and graphs. He found that gross profit margin reduced tremendously thus shrinking the company’s gross profit after introduction of oil price regulation. The main limitation of the study was that data was historical and therefore the findings could not be fully applicable at the time of the study due to the dynamic operating environment in the Kenyan market. The study was also limited to one oil marketing company and could fail to give a true representation of other companies.
2.2.5 Debt Financing

When a company borrows money to be paid back at a future date with interest it is known as debt financing. It could be in the form of a secured as well as an unsecured loan. A firm takes up a loan to either finance a working capital or an acquisition. Debt financing is a time-bound activity where the borrower needs to repay the loan along with interest at the end of the agreed period. The payments could be made monthly, half yearly, or towards the end of the loan tenure (Altman et al., 2010).

According to Semgomba, (2013), an impact of the oil price regulation on company accounts was the increased risk of impairment of assets that had been invested by the shareholders. Lower oil price forecasts meant that oil marketing companies should have expected lower future profits from assets like storage facility tanks. Subsequently, this reduced the present value of the asset, and if the value currently carried on balance sheets could not be recovered in full, this resulted in write-off. Companies may have also found renegotiating debt challenging. At times of high oil prices, refinancing existing debt either through bank borrowings or issuing new bonds was relatively straightforward. However, lower asset values and increased default risks meant that borrowers would have faced increasing challenges, including the need to pay higher interest rates or enhance security packages, if they were able to borrow in the first place. The price deck utilized by reserve base lenders (RBLs) could also be reduced significantly, leading to a reduction of RBL facilities and the acceleration of debt repayment schedules, putting even more strain on company profits.

2.2.6 Operational Efficiency

Operational efficiency is the capability of an enterprise to deliver products or services to its customers in the most cost-effective manner possible while still ensuring the high quality of its products, service and support. Operational efficiency is often achieved by streamlining a company's core processes in order to more effectively respond to continually changing market forces in a cost-effective manner (Chaudhuri et al., 2011).

Price cap regulation reduced the need for micromanaging the operations of the regulated firm. The regulatory focus was on price increases that were more transparent and less
susceptible to problems of ‘information asymmetry’ than costs. Once the price cap rule was established, the firm had more flexibility to determine how to operate its business in order to achieve maximum efficiencies and how to structure its prices (within the overall constraints of the price cap framework) to achieve its commercial objectives. This in the long run became profitable to the business (Armstrong et al, 2006).

2.3 Effect of price regulation on Earning per share within Oil Marketing Companies.

Earnings per share (EPS) is the portion of a company's profit allocated to each outstanding share of common stock. Earnings per share serves as an indicator of a company's profitability. However, data sources sometimes simplify the calculation by using the number of shares outstanding at the end of the period. The term earnings per share (EPS) represents the portion of a company's earnings, net of taxes and preferred stock dividends, that is allocated to each share of common stock. The figure can be calculated simply by dividing net income earned in a given reporting period (usually quarterly or annually) by the total number of shares outstanding during the same term. Because the number of shares outstanding can fluctuate, a weighted average is typically used (Marr, 2012).

2.3.1 Market Entry and Exit of Firms

According to Motta (2004), a barrier to entry is something that blocks or impedes the ability of a company (competitor) to enter an industry. They include the existence of high startup costs or other obstacles that prevent new competitors from easily entering an industry or area of business. Barriers to entry benefit existing firms already operating in an industry because they protect an established company's revenues and profits from being whittled away by new competitors. Common barriers to entry include patents, strong customer loyalty, and high customer switching costs. Whereas, a barrier to exit is something that blocks or impedes the ability of a company (competitor) to leave an industry. Therefore, rivalry among competitors can be intense. Barriers to exit are obstacles in the path of a firm which wants to leave a given market or industrial sector. For example, huge exit costs, such as asset write-offs and closure costs.

According to Dalen et al. (2006) when a pharmaceutical patent would expire, generic firms would enter the market and start selling copies of the original drug. As generic drugs contained exactly the same active chemical substances, they were certified to be perfect
substitutes to the original branded drugs. In competitive markets, entry of firms producing perfect substitutes would trigger fierce price competition, bringing monopoly rents enjoyed by the original patent holder to an end. Scale economies were not considered to be important in production of already innovated drugs. Dalen et al., further studied the effects of price regulation on generic competition in pharmaceutical market in Norway. The dataset was provided by the Norwegian Social Insurance Agency, and covered monthly observation of the six chemical substances included in the index price system. The data was collected at 22 pharmacies in Norway in the period 1998-2004. The study established a structural model that enabled examination of the impact of the price regulation on both demand and market power. The sample of pharmacies was considered to be representative for the sale of drugs in Norway. The main variables reported by the pharmacies were volume of sale, both in retail value and number of defined daily doses (DDD) for each product. These were used to calculate the prices per DDD and market shares of each product within the submarket (chemical substance). The results suggested that the price caps helped to increase the market shares of generic drugs and succeeded in triggering profitability.

According to Langenfeld et al. (1989), new entrants were attracted into the market as long as they could provide an improved service for the same or lower cost, due to the homogeneity of products offered by OMC’s. In such a case, the incentives to reduce service levels were removed because such a strategy could lead to a rapid erosion in market share due to a shift in the sales from the already existing OMC’s to the new entrants. This decrease of market share due to many new entrants would cause the major OMC’s to reduce in size. This had seen more than 30 new entrants since the introduction of the price regulation in the oil industry in Kenya. Thus translating to a reduction of profitability for the oil marketing companies that were the initial entrants of that market.

2.3.2 Market forces of Demand and Supply

Market forces are the factors that influence the price and availability of goods and services in a market economy, i.e. an economy with minimum of government involvement. Market forces push prices up when supply declines and demand rises, and drive them down when supply grows or demand contracts. When demand equals supply for a product or
service, the market is said to have reached equilibrium. Forces of demand and supply represent the aggregate influence of self-interested buyers and sellers on price and quantity of the goods and services offered in a market. In general, excess demand causes prices and quantity of supply to rise, and excess supply causes them to fall (Porter, 2000).

According to Njoroge (2005), he found out that price regulation had attracted previous resistance from oil marketers who opted for markets to be controlled by forces of demand and supply. In the 4 -5 years prior to re-introduction of price regulation, most multinationals had restructured and relocated their business to regions with the highest market growth, high returns on investment and low political and business risks. According to Scott (2011), his study concluded that when governments adopted a price control, it defined the market price of a product and forces all, or a large percentage of transactions to take place at that price instead of the equilibrium set through supply and demand. As supply and demand shifted constantly in responses to costs, the government’s price would change only after a lengthy political process as it is never at an equilibrium, it will either be too high or low resulting in dead weight loses because of failure to rate consumer or producer surplus.

Maximum retail prices may not capture all the elements of cost of supply chain for example, cost of financing imports, demurrage fees costs and hospitality fees. Simultaneously, as oil companies became more constrained, their ability to expand their market and contribute to economic growth would be hampered during normal times, thus reducing the company’s overall profitability (Total Kenya Limited, 2012).

2.3.3 Consumer Protection

Consumer protection is a group of laws and organizations designed to ensure the rights of consumers, as well as fair trade, competition, and accurate information in the marketplace. The laws are designed to prevent the businesses that engage in fraud or specified unfair practices from gaining an advantage over competitors. They may also provide additional protection for those most vulnerable in society. Consumer protection laws are a form of government regulation that aim to protect the rights of consumers. For example, a government may require businesses to disclose detailed information about various products (Waller et al, 2011).
Price caps were introduced to protect the consumer but evidence also showed that this may in turn lower or eat into the profits of the supplier. When pricing as a marketing strategy was controlled, firms had to look for other competitive strategies in order to survive. It is with this that the oil marketers had to adjust their operations to fit into the market ensuring that they continued to remain as profitable as possible (Ombungu, 2011). In such an environment, industry attractiveness and margins were reduced and the level of competition by firms also increased. Policymakers of price regulation needed to be mindful of the fact that intervention that was aimed at preventing or reducing negative consequences to consumers as a miscalculated price cap could reduce or eliminate the beneficial impacts like profitability to the organization (Borenstein, 2008).

2.3.4 Productivity Growth
Productivity describes various measures of the efficiency of production. A productivity measure is expressed as the ratio of output to inputs used in a production process, i.e. output per unit of input. Inputs include labor and capital, while output is typically measured in revenues and other gross domestic product (GDP) components such as business inventories. Productivity is a crucial factor in production performance of firms and countries. Increasing national productivity can raise living standards because more real income improves people's ability to purchase goods and services, enjoy leisure, improve housing and education and contribute to social and environmental programs. Productivity growth also helps businesses to be more profitable (Young, 1995).

Sappington et al, (2010) studied the impact of price cap regulation on productivity growth in the US telecommunications industry between 1988 and 1998. The authors identify a “pronounced positive effect of price cap regulation on growth.” They find that 24 of the 25 firms in the sample “experienced an increase in mean technological change” and that 23 of the 25 firms “experienced an increase in annual productivity growth following the implementation of regulation” which in turn translated to higher profits. In her study of exchange markets in the US between 1991 and 2002, Eckenrod (2006), corroborated earlier findings that price cap regulation was indeed associated with higher earnings for regulated suppliers.
2.3.5 Financial Performance

According to Richard et al, (2009), financial performance is a subjective measure of how well a firm can use assets from its primary mode of business and generate revenues. This term is also used as a general measure of a firm's overall financial health over a given period of time, and can be used to compare similar firms across the same industry or to compare industries or sectors in aggregation. In other words, it is measuring the results of a firm's policies and operations in monetary terms. These results are reflected in the firm's return on investment, return on assets, value added, etc.

Price regulations served as prudential measures that mitigated the effects of economic crises on the stability of the oil industry and subsequent accompanying macroeconomic results (Arrow, 1985). On the other hand, excessive regulations might have increased the cost of intermediation and reduced the profitability of OMCs. Price regulations used parameters which were historical in nature and forecasted averages which distorted the true cost of the product leading to losses (Pirog, 2012). Petroleum price regulation had a direct bearing on gross revenues of oil companies as it determined the price at which the oil companies sold their products and was therefore expected to ultimately affect financial performance. There were a number of other factors that also affected the financial performance of oil companies. The efficiency of the supply chain affected the level of service delivery by oil companies to its customers. Faster product availability was key to increasing revenues and considerable profit advantage for the extra time that you were in the market and your competitor was not (Sibley et al, 1991).

Kilian (2008) analyzed the impacts of the regulation of petroleum prices on the financial performance of Total South Africa Limited. He observed that there was significant negative impact in the financial performance of the company for three years after introduction of price regulation. He used ratio analysis to measure the performance three years before and after introduction of price caps.

2.4: Effects of price regulation on the Sales Growth of Oil Marketing Companies

Growth potential is an organization's future ability to generate larger profits, expand its workforce and increase production. In the business sense, an organization's growth potential
depends heavily upon its leadership's expectations for success, and the quantitative and qualitative measures used to determine expansion readiness (Abramovitz, 1986).

Sales growth refers to the amount by which the average sales volume of a company's products or services has grown, typically from year to year. Sales growth is considered positive for a company’s survival and profitability. It may result in increased dividends for shareholders and/or higher stock prices.

2.4.1 Mergers and Acquisitions

A Merger refers to the combination of two or more firms, in which the resulting firm maintains the identity of one of the firms, usually the larger. An acquisition, also known as a takeover or a buyout, is the buying of one company (the ‘target’) by another. Despite liberalization in the oil industry in 1994 that resulted in the increase in the number of independent oil distribution companies in Kenya, the major oil companies had managed to maintain their status through acquisitions and mergers. For example, in 2006 Kenya Shell acquired the Shareholding of BP in Kenya increasing its market share. Oil Libya acquired Exxon Mobil shareholding in Kenya in 2007. In 2008, Total Kenya acquired all the assets of Chevron in Kenya. Other mergers were those of Kenya Oil Company Limited (Kenol) which merged with Kobil to form Kenol/Kobil Ltd (Ireri, 2011). According the East African Magazine (August 2013), “Kenya’s recent successes in oil exploration are triggering a new round of mergers and acquisitions in the lucrative but high-risk business as the new discoveries have resulted in reshaping company strategies. Junior exploration firms that is, companies that do exploration in the hope that a positive find will tempt shareholders to invest more in them or make them an acquisition target, are expected to become prime targets for multinationals seeking a foothold in the country before commercial production of crude oil and natural gas starts.” According to the East African Magazine (August 2013), the country’s risk profile had been greatly reduced by the announcement by Tullow Oil and partner Africa Oil that their find was commercially viable Further, the article discussed that, “A new wave of mergers and acquisitions is in the foreseeable future as relatively smaller explorers with large acreage in Kenya are becoming targets for financially well-endowed firms. They have to sell part of their exploration rights to raise funds to expedite well drilling
to comply with work programmes agreed on with the Ministry of Energy,” said Robert Shisoka, a consultant at Hydrocarbons Management Ltd.

Ansof, et al. (1971) found that after an acquisition, low sales growth companies showed significantly higher rates of growth, whereas, high sales growth companies showed lower rates of growth. However, even though low sales growth companies showed higher rates of growth after acquisitions, they actually suffered decreases in their mean Price earnings ratios, mean EPS and mean dividend payouts. The was a similar pattern of inconsistency found in the high sales growth companies whereby their performance levels for EPS, Price earnings ratio, earnings and dividend payouts were greater. Low sales growth companies financed their acquisitions through decreased dividend payouts and the use of new debts. In contrast, high sales growth companies with other strategies tended to decrease debts but increased dividend payouts. Acquisitions were in general unprofitable, as they did not contribute to increases in all of the variables of the companies' growth. Acquiring firms registered lower rates of growth as compared to the non-acquiring firms and this was more pronounced for low sales growth acquiring firms.

2.4.2 Market Positioning Strategies

According to Barnes (2003), positioning refers to the place that a brand occupies in the mind of the customer and how it is distinguished from products from competitors. Primarily, it is about "the place a brand occupies in the mind of its target audience". A well-positioned company will beat the competition that has a comparable offering. It is a long-term effort to solidify the identity of a company, and its products or services, in a unique space within the minds of the target audience. It is an organized attempt for a brand to set itself apart from the crowd and influence the way their target audience perceives them.

Mwangi (2013) studied the positioning strategies in the insurance industry and identified various elements that could be used by the companies to competitively position themselves in the industry. She identified price as a major element where firms could choose to be market leaders in terms of price, or use pricing to communicate a higher brand and product value. She acknowledged that price was highly regulated but companies still managed to underprice their products in order to beat competition. Where this was completely fixed,
what happened to the sales of the companies that were leaders in pricing? Marucha (2012) studied the core competencies and competitive advantage of insurance firms in Kenya. He defined core competencies as those unique capabilities which usually spanned over multiple products or markets. He identified them as customer service, flexibility, product differentiation and information management systems. Others included, integrity, strong brand, staff skills, regional presence and prudent and ethical practices. On the flexibility, the firms embraced product customization that included extra benefits and competitive pricing. Marucha concluded that firms used their core competencies to achieve competitive advantage in markets where price was regulated. As such the firms must continually identify and strengthen their core competencies in order to sustain competitive advantage.

2.4.3 Sales Promotion Strategies

A push promotional strategy makes use of a company's sales force and trade promotion activities to create consumer demand for a product. It involves convincing trade intermediary channel members to push the product through the distribution channels to the ultimate consumer via promotions and personal selling efforts. A pull strategy attempts to get consumers to “pull” the product from the manufacturer through the marketing channel. The company focuses its marketing communications efforts on consumers in the hope that it stimulates interest and demand for the product at the end-user level. A “pull” selling strategy is one that requires high spending on advertising and consumer promotion to build up consumer demand for a product (Webster, 2000). Recent statistics show that more money is now spent on direct marketing and sales promotion activity than on advertising in print and broadcast media.

Richards and Peterson (2005) acknowledged price as a major factor in influencing sales, and proposed price discrimination when promoting sales on short term basis. Parkinson (2010), in his study of sales volumes variances identified various challenges that come with sales volumes that are either higher than or lower than the planned sales, especially in standardized price scenario. He concluded that these variances disorganized the budgets set by organizations, especially because of the contribution margins that end up not delivering to the budgeted profits. Balaghar 2012, evaluated all the promotional elements that an organization can use to increase sales volumes. He identified discounted prices as one way
of increasing the sales volumes. He also identified alternative promotional tools such as advertising, flexible payment terms, public relations, direct selling and direct marketing. He concluded that the main reason for implementing the sales promotion elements was to increase sales and in turn profits as well.

2.4.4 Sales Volume Manipulation

Sales Volumes refers to the general lump sum of goods and services supplied during a given trade period at a given price. Many factors affecting the volume of sales include price, brand awareness, company image, people’s needs and wants, awareness about the product, etc. Others include distribution, quality of the product and convenience both at acquisition, usage and disposal (Willey, 2003). On the other hand, manipulation is a means to getting what you want. An understanding in sales volume manipulation will help a firm succeed because when you understand what's going on in a customer’s mind you can better prepare and take counter measures of your own. The aim of manipulation is to control. Using manipulation would result in win and loss situations. Sometimes you would make sales and other times your targets would outsmart you and fail to make any purchases (Leifer, 2000).

Managers needed to know how to deal with price in order to manipulate the volume of sales and eventually Earnings per share. They should have realized that sales volumes (being the beginning assumption) depended on price (the end of the process) and the two determined the earning per share which translated to profits earned after deducting operating costs. Micu (2012) actually discovered that anticipated pricing and volumes of sales should be used to determine the costs of a product.

According to Mweru (2014), in the insurance industry, most products had little differentiators even at value addition. All companies had almost similar distribution channels and product awareness which had already been over-exploited. Still companies had to ensure that they made sales for them to remain afloat. This left marketers with only one major variable which they could use to attract more sales i.e. Price. There existed an inverse relationship between price and sales volumes, holding all other factors constant. The higher the price the lower the volumes of sales, and the lower the price the higher the sales volumes. For insurance companies, competition around the pricing of their products was so severe that the lowest prices then seemed to be the norm rather than a negotiated deal. They seemed to
be capitalizing on the notion that if they sold cheaply, they would sell more. When they sold more, the small margin that they put on the price was multiplied so many times more such that it ended up being a good profit in total. Sales volumes in the industry translated into a proportionate market share which was the current measure of size of the different players in the market. It was noted that four companies controlled at least 60% of the market share meaning they carried that proportion of sales volumes in the year leaving another forty-four to share the balance.

2.5 Chapter Summary

The oil price regulation in Kenya has impacted Kenyan oil marketing companies in a variety of ways. This chapter explored different empirical reviews on the research gaps in this paper regarding price regulation and the various ways in which the regulation had impacted different firms, cross cutting through various industries, not just within the oil industry.

Chapter three presents the research methodology used in this study. It details the research design, population and sampling, data collection methods, research procedures and how data collected was analyzed. Chapter four presents the results and findings of the study. Chapter five presents the discussion, conclusions and recommendations of the study.
CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the research methodology. The chapter covers research design, population and sampling design, data collection methods, research procedures, data analysis methods and chapter summary.

3.2 Research Design

This study adopted was a causal research study approach. Causal studies are concerned with learning how one variable produces changes in another (Cooper & Schindler 2003). The emphasis is on specific objectives about the effects of changes in one variable on another variable and it involves an experiment where an independent variable is changed or manipulated to see how it affects a dependent variable. The study sought to establish and explain the relationships among variables, in this case, price regulation on petroleum products against company performance of oil marketing companies.

3.3 Population and Sampling Design

3.3.1 Population

A population refers to an entire group of individuals, events or objects having a common observable characteristic (Mugenda and Mugenda, 2003). A population describes the parameters whose characteristics the research will attempt to describe.

According to Mugenda and Mugenda (2003), a target population is that population in which a researcher wants to generalize the results of a study while Sim & Wright, (2000) defined target population as the collection of cases where the researcher is interested and wishes to make generalizations. Further, Wood and Ross-Kerr (2011) added that a target population is identical to the total population that the researcher starts with. Consequently, Stevens, Wrenn, Sherwood and Ruddick (2006) gave some clues of identifying the target population by saying that this kind of population can be identified from the statement of research purpose.
According to ERC, there are over 90 oil marketing companies registered in Kenya. However, since this research was based on a case study, the target population for this study constituted the biggest oil company in Kenya, Total Kenya that has a leading market share within the industry of about 18%. (Petroleum Insight Magazine, 2016). The study analyzed the financial statements of this company over a period 5 years between 2008 and 2012. This was the period before and after price regulation was reintroduced into the Kenyan Oil industry in December 2010.

3.3.2 Sampling Design

Connaway and Powell (2010) defined a sample as a selection of units from the total population for the purposes of the study. According to Mugenda and Mugenda (2003), the sample should be large enough to represent the salient characteristics of the target population. Sekaran and Bougie (2009 p. 266) define sampling as the “process of selecting a sufficient number of the right elements from the population.” The major steps in sampling are: defining the population, determining the sample design, establishing the appropriate sample size and carrying out the sampling process. A sample can be chosen randomly or the researcher can select people who are easier to obtain information.

3.3.2.1 Sampling Frame

A sampling frame is a list of population units/elements from which to select units/elements to be sampled (McDaniel & Gates, 2001). The method of sampling in the study was a case study of Total Kenya which was currently the oil marketing company with the highest market share in Kenya with over 18% market share. The sample elements were the company’s financial statements.

3.3.2.2 Sampling Technique

A sampling design is a definitive plan for obtaining a sample from a given population. It refers to the technique or the procedure the researcher would adopt in selecting items for the sample. Sampling is described as the process by which a relatively small number of individual, object or event is selected and analyzed in order to find out something about the entire population from which was selected (Mugenda, 2008).
Total population sampling is a type of purposive sampling technique where you choose to examine the entire population (i.e., the total population) that have a particular set of characteristics. In sampling, units are the things that make up the population (Kothari, 2004). This type of sampling is usually used when the size of the population that has a particular set of characteristics is very small, and therefore if the researcher fails to include all the number of units in their research a significant piece of the study will be missing.

### 3.3.2.3 Sample Size

The sample of a study is a smaller number of members or cases from the population which is carefully selected so as to be representative of the whole population with the relevant characteristics. Where time and resources allow, a large sample is recommended. Since small samples do not reproduce the salient characteristics of the accessible population to an acceptable degree, 10% of the accessible population is sufficient (Mugenda, 2008). This study used financial statements of Total Kenya Ltd, as this research was a case study.

### 3.4 Data Collection Methods

The study used secondary sources of data from published financial statements, Ministry of Energy statistics and industry reports. Financial data from balance sheets, income statements and cash flow statements from 2008 to 2012 were used in addition to, quarterly published journals by the Petroleum Institute of East Africa (PIEA) and Ministry of Energy. The research also collected secondary data from published sources such as newspaper and websites so as to compare and enrich the above mentioned data sources. The data was collected using Microsoft excel since excel was capable of recording and managing the data. Microsoft excel was also used as an interpretation tool since it had various functions necessary for interpreting the data for example drawing of tables and graphs which were needed to understand the trend of the various variables analyzed. Statistical Package for the Social Sciences (SPSS) was used for statistical analysis of the data for example using SPSS, descriptive analysis was used to quantitatively describe and summarize features collected regarding the information detailing the correlations between the independent variable and the 3 dependent variables.
3.5 Research Procedures

Research procedure is the process through which the researcher engages to collect data from the secondary data available. The researcher obtained 2 research permits from both the University’s Research department offices and the National commission for science, technology & innovation so as to be able to get authorization to collect data from Total Kenya Ltd. The researcher used a variety of secondary sources to collect the data and these included: Total Kenya financial statements available on the NSE and Total Kenya webpages.

3.6 Data Analysis Methods

The company performance of oil companies before and after introduction of price controls was analyzed. The researcher analyzed the 3 dependent variables in question and the relationship that each one of them has with the independent variable that is, price regulation over a 5-year period between 2008 to 2012. Quantitative data is data that can be quantified and verified, and is amenable to statistical manipulation. Therefore, Quantitative data analysis is a systematic approach to investigations during which numerical data is collected and/or the researcher transforms what is collected or observed into numerical data (Teddlie et al, 2003). On the other hand, time Series is a collection of observations, each one being recorded at time. For this research, all the quantitative data that was collected at the end of each of the 5 years in a time series manner in order to extract meaningful statistics and other characteristics of the data.

All of the three research questions were analyzed in a manner that responds to each of the research questions. The analysis of each independent variable was to establish the existence of the relationship it had with the dependent variable of price regulation, the strength of the relationship and the direction of the relationship. The information was analyzed by use of a computer Statistical Package for Social Science (SPSS) and Microsoft office 2007 application and presented in figures, bar charts, graphs and tables.

The return on equity ratio or ROE is a profitability ratio that measures the ability of a firm to generate profits from its shareholders’ investments in the company.

The equation for calculating return on equity is as follows:
ROE = Net Income/ Shareholder’s Equity

The ROE for the 5 years between 2008 and 2012 was analyzed.

**Earnings per share, also known as EPS** tells shareholders how much money each share of their stock earned for the company. It’s important because, usually, when a company has a high earnings per share, it also has a high stock price, which makes investors happy.

The equation for calculating earnings per share is as follows:

\[
\text{Earnings per Share} = \frac{\text{Net Income} - \text{Preferred Dividends}}{\text{Number of Common Shares Outstanding}}
\]

This variable was also analyzed on a graph so as to analyze the trend of how this dependent variable was related to the independent variable of price regulation.

**Sales Growth analysis** is used to measure the pace at which your organization's sales revenue is increasing or decreasing. This information was collected from the company’s income statements for the years 2008 to 2012. The year on year sales values was analyzed in a sequential method so as to come up with a trend on how sales of the target population was affected year on year before and after price regulation was re-introduced in 2010.

**3.7 Chapter Summary**

This chapter presents the research methodology that will be used in this study. The chapter covers research design, population and sampling design, data collection methods, research procedures, data analysis methods. Chapter four presents the results and findings of the study. Chapter five presents the summary, discussion, conclusions and recommendations of the study.
4.0 RESULTS AND FINDINGS

4.1 Introduction

This chapter presents the results and findings of the research study. Findings from examining the financial statements of Total Kenya Ltd regarding the research questions which are impact of price regulation on the return on equity, effect of price regulation on earnings per share and effect of price regulation on the sales trend of oil marketing companies are presented and discussed here. The chapter closes with a chapter summary.

4.2 General Information

The research targeted Total Kenya Ltd as the case study. Total Kenya is the major oil marketing company in Kenya with a leading market share within the industry of about 18% (Petroleum Insight Magazine, 2016). The study analyzed the financial statements of this company over a period 5 between the years 2008 to 2012 this is 2 years before and 2 years after price regulation was reintroduced into the Kenyan Oil industry in December 2010.

4.3 Price Regulation and Effect on Return on Equity

The study sought to establish the relationship between price regulation and return on equity for the company between the year 2008 and 2012. The findings were as shown in table 4.1 and figure 4.1 below:

| Table 4.1: Trend analysis of Return on Equity for 2008 to 2012 |
|-----------------------------------|-------|-------|-------|-------|-------|
| Years                            | 2008  | 2009  | 2010  | 2011  | 2012  |
| Net Income (Kes)                 | 703,894.00 | 482,585.00 | 916,205.00 | (71,436.00) | (202,142.00) |
| Shareholder's Equity (Kes)       | 5,017,822.00 | 8,962,191.00 | 9,579,853.00 | 9,194,818.00 | 854,765.00 |
| ROE (%)                          | 14.03% | 5.38% | 9.56% | -0.78% | -23.65% |
Table 4.1 presents the return on equity recorded by Total Kenya in 2008 was 14.03%. In 2009, the ROE dropped to 5.98%. In 2010, the ROE improved to 9.56%. In 2011, there was a decrease on the ROE to -0.78% and in 2012 the ROE had a further decrease to -23.65%. There was a downward trend.

**Figure 4.1: Trend analysis of Return on Equity for 2008 to 2012.**

From the findings of Figure 4.1, the return on equity recorded by Total Kenya in 2008 was 14.03%. In 2009, the ROE dropped to 5.98%. In 2010, the ROE improved to 9.56%. In 2011, there was a decrease on the ROE to -0.78% and in 2012 the ROE had a further decrease to -23.65%.

### 4.4 Price Regulation and Effect on Earnings Per Share

The study sought to establish the relationship between price regulation and earnings per share for the company between the year 2008 and 2012. The findings were as shown in table 4.2 and figure 4.2 as below:
Table 4.2: Trend analysis of Earnings per share for 2008 to 2012

<table>
<thead>
<tr>
<th>Years</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPS</td>
<td>4.02</td>
<td>1.62</td>
<td>0.20</td>
<td>-2.08</td>
<td>-0.32</td>
</tr>
</tbody>
</table>

Table 4.2 presents the earnings per share recorded by Total Kenya in 2008 was 4.02. In 2009, the EPS dropped to 1.62 In 2010, the EPS decreased to 0.20. In 2011, there was a further decrease on the EPS to 2.08 and in 2012 the EPS had a decrease to -0.32. There was a downward trend.

Figure 4.2: Trend analysis of Earnings per share for 2008 to 2012

Figure 4.2 presents the earnings per share recorded by Total Kenya in 2008 was 4.02. In 2009, the EPS dropped to 1.62 In 2010, the EPS decreased to 0.20. In 2011, there was a decrease on the EPS to -2.08 and in 2012 the EPS had a decrease to -0.32.

4.5 Price Regulation and Effect on Sales Growth

The study sought to establish the relationship between price regulation and Sales growth for the company between the year 2008 and 2012. The findings were as shown in table 4.3 and figure 4.3.
Table 4.3: Trend analysis of Sales for 2008 to 2012

<table>
<thead>
<tr>
<th>Years</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales per year (sh.'000)</td>
<td>54,807,521.00</td>
<td>41,311,598.00</td>
<td>79,206,640.00</td>
<td>105,590,360.00</td>
<td>119,788,989.00</td>
</tr>
</tbody>
</table>

Table 4.3 presents the sales amount observed for Total Kenya in 2008 was Ksh. 54,807,521. In 2009, the revenue slightly dropped to Ksh. 41,311,598.00. In 2010, there was an increase of revenue to Ksh. 79,206,640. A further increment was observed in 2011 of Ksh. 105,590,360, and in 2012, there was a further increment to Ksh. 119,788,989. There was an upward trend.

Figure 4.3: Trend analysis of Sales for 2008 to 2012

Figure 4.3 presents the sales amount observed for Total Kenya in 2008 was Ksh. 54,807,521. In 2009, the revenue slightly dropped to Ksh. 41,311,598.00. In 2010, there was an increase of revenue to Ksh. 79,206,640. A further increment was observed in 2011 of Ksh. 105,590,360, and in 2012, there was a further increment to Ksh. 119,788,989.
4.6 Descriptive Statistics Data used to derive the Descriptive Analysis

<table>
<thead>
<tr>
<th>Years</th>
<th>Before Regulation</th>
<th>Year of Regulation</th>
<th>After Regulation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2008</td>
<td>2009</td>
<td>2010</td>
</tr>
<tr>
<td>Return on Equity (%)</td>
<td>14.03%</td>
<td>5.38%</td>
<td>9.56%</td>
</tr>
<tr>
<td>Earnings per share</td>
<td>4.02</td>
<td>1.62</td>
<td>0.2</td>
</tr>
<tr>
<td>Sales per year (sh.'000)</td>
<td>54,807,521.00</td>
<td>41,311,598.00</td>
<td>79,206,640.00</td>
</tr>
</tbody>
</table>

4.6.1 Descriptive Analysis of Co-Factors

Descriptive analysis was done using SPSS and Microsoft Excel 2016 and the results were presented as below.

Table 4.4 Descriptive Analysis results

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Median</th>
<th>Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>Return on Equity</td>
<td>-.0040%</td>
<td>.15372%</td>
<td>0.05%</td>
<td>-0.24%</td>
</tr>
<tr>
<td>Earnings Per Share</td>
<td>1.60</td>
<td>1.673</td>
<td>2.00</td>
<td>2</td>
</tr>
<tr>
<td>Sales Growth</td>
<td>80,141,021.60</td>
<td>33,053,039.2</td>
<td>79,206,640.00</td>
<td>41,311,598.00</td>
</tr>
</tbody>
</table>

From the findings of (Table 4.4), the analysis of the factors revealed that Return on Equity had a mean of -.0040%, and a standard deviation of 0.15372%. An analysis of the Earnings Per Share showed that the mean was 1.60 and a standard deviation of 1.673. An analysis of the Sales Growth indicates that there was a mean of Kes 80,141,021.60 and a standard deviation of Kes. 33,053,039.00.

4.6.2 Test for Normality

Tests were done to establish the normality of the Return on Equity, Earnings per Share and Sales Growth. Using Kolmogorov-Smirnov (KS) and Shapiro-Wilk (SW) values were established as shown in table 4.5.
Table 4.5: Kolmogorov-Smirnov and Shapiro-Wilk tests

<table>
<thead>
<tr>
<th>Price Regulation</th>
<th>Kolmogorov-Smirnov&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Shapiro-Wilk</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Statistic</td>
<td>df</td>
</tr>
<tr>
<td>Return on Equity</td>
<td>0.237</td>
<td>5</td>
</tr>
<tr>
<td>Sales</td>
<td>0.179</td>
<td>5</td>
</tr>
<tr>
<td>Earnings per share</td>
<td>0.231</td>
<td>5</td>
</tr>
</tbody>
</table>

* This is a lower bound of the true significance.

<sup>a</sup> Lilliefors Significance Correction

Table 4.5 presents the analysis of the Smirnoff Kolmogorov test indicates that the value for ROE was 0.237, the value for sales was 0.179 and the value for EPS was 0.231. Analysis of the Shapiro Wilk test indicates that the value for ROE was 0.479, the value for sales was 0.734 and the value for EPS was 0.314. These values were not significant as (P>0.05) thus implying that the data was normally distributed.

4.6.3 Regression Analysis

Multiple regression analysis was used to help to assess the effect that petroleum price regulation had on the company performance of Total Kenya Limited. Regression analysis was done using Microsoft Excel 2007 and results presented in the Table 4.6.

Table 4.6: Regression Model Results

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>Change Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>R Square Change</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>F Change</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>df1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>df2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Sig.</td>
</tr>
<tr>
<td>1</td>
<td>.921&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.849</td>
<td>.397</td>
<td>.347</td>
<td>.849</td>
</tr>
</tbody>
</table>

<sup>a</sup> Predictors: (Constant), ROE, EPS, SALES
The research analyzed the relationship between the dependent variable-price regulation against the independent variables of Earnings per share, Return on equity and Sales growth. Coefficient of Determination measured by the adjusted R square value illustrated the variance level in the outcome variable (y) that can be explained by variations in the independent variables (x). The adjusted R squared was at 0.397 which indicates that 39.7% of changes in company performance of oil firms in Kenya caused by the changes in Return on Equity, Earnings per share and Sales. The standard error which measures the standard deviation on company performance around its fitted value was 0.347 (34.7%).

4.6.3 ANOVA Analysis (Statistical Significance of the Model).

The significance of the estimated model can be summarized in the ANOVA. ANOVA analysis was done using Microsoft Excel 2007 and results presented in the Table 4.7.

Table 4.7: ANOVA Analysis Results

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>.679</td>
<td>3</td>
<td>.226</td>
<td>1.876</td>
<td>.482b</td>
</tr>
<tr>
<td>Residual</td>
<td>.121</td>
<td>1</td>
<td>.121</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>.800</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*a. Dependent Variable: price regulation*

*b. Predictors: (Constant), ROE, EPS, SALES*

An ANOVA analysis was done between price regulation against Earnings per share, sales and Return on equity at 95% confidence level, the results of the F critical was 1.876 and the P value was (0.482) therefore not significant.

4.6.4 Coefficients Analysis

An analysis of the coefficients was done using Microsoft Excel 2007 and results presented in the Table 4.8.
Table 4.8: Coefficients Analysis Results

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>2.154</td>
<td>1.029</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EPS</td>
<td>-.232</td>
<td>.119</td>
<td>-1.183</td>
<td>-1.949</td>
</tr>
<tr>
<td>SALES</td>
<td>-.015</td>
<td>.012</td>
<td>-1.084</td>
<td>-1.224</td>
</tr>
<tr>
<td>ROE</td>
<td>-2.139</td>
<td>2.051</td>
<td>-.735</td>
<td>-1.043</td>
</tr>
</tbody>
</table>

As per Table, the equation \( Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 \) becomes:

\[
Y = 2.154 - 0.232X_1 - 0.015X_2 - 2.139X_3
\]

Where \( Y \) is the dependent variable price regulation

\( X_1 \) – EPS

\( X_2 \) – Sales

\( X_3 \) – ROE

The regression equation illustrated established that taking all factors into account (Earnings per share, sales and Return on equity) and all other factors held constant price regulation changed by 2.154. The findings presented also showed that with all other variables held at zero, a unit change in EPS would lead to a -0.232 change in price regulation, and a unit change in sales would lead to -0.015 change in price regulation. Moreover, the study also showed that a unit change in ROE would result in -2.139 change in price regulation. No variable was significant (p> 0.05). There is a weak inverse relationship between price regulation and the 3 independent variables.

4.7 Chapter Summary

This chapter looked at data analysis and the research findings. The data collected was analyzed and interpreted in line with the objectives of the study which was to establish the effect of price regulation on company performance.

Chapter five presents the summary, conclusions and recommendations of the study.
CHAPTER FIVE

5.0. SUMMARY, DISCUSSIONS, CONCLUSIONS, AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary, discussions, conclusions and recommendations of the study. The summary highlights the important elements including the purpose of the study and research questions, research methodology used and major findings or results. The discussion section focuses on the major findings in line with the research questions. The major conclusions drawn from the research findings are also presented. Finally, this chapter presents recommendations for the company and improvement for further studies.

5.2 Summary

Between 2007 and 2010, Kenya experienced sharp increases in retail pump prices causing public outcry from Central Organization of Trade Unions and the civil society. In December 2010, the government re-introduced price controls to cap the maximum pump prices in order to protect the general public from exploitation by oil companies. The purpose of case study therefore, was to establish how the company performance of Total Kenya Limited was affected by price regulation re-introduction in 2010. The first research question analyzed was the impact of price regulation on the return on equity of Oil marketing companies, the second question was on the effect of price regulation on the earnings per share of oil marketing companies and finally research question three analyzed how price regulation impacted the sales trend of oil marketing companies.

This study adopted a causal research design. The target population for this study was Total Kenya Limited as this was a case study. The study analyzed the financial statements of this company over a 5-year period between 2008 and 2012. The study used secondary data which was analyzed using trend analysis, multiple regression model and tested using, Kolmogorov-Smirnov and Shapiro Wilk tests. Statistical Package for Social Sciences (SPSS) and Microsoft excel 2007 were used to analyze and present the data in form of tables and graphs.
From the trend analysis conducted, the Return on equity for the period between 2008 and 2012 exhibits a downward trend. For 2008 ROE was 14.03%. In 2009, the ROE dropped to 5.98%. In 2010, the ROE improved to 9.56%. In 2011, there was a decrease on the ROE to -0.78% and in 2012 the ROE had a further decrease to -23.65%. The trend analysis conducted for the Earnings per share also exhibited a downward trend. The earnings per share recorded in 2008 was 4.02. In 2009, the EPS dropped to 1.62. In 2010, the EPS decreased to 0.20. In 2011, there was a decrease on the EPS to -2.08 and in 2012 the EPS had a decrease to -0.32. The trend analysis conducted for Sales exhibited an upward trend. The sales recorded in 2008 were Ksh. 54,807,521. In 2009, the sales dropped to Ksh. 41,311,598.00. However, in 2010, there was an increase to Ksh. 79,206,640. A further increment was observed in 2011 of Ksh. 105,590,360, and in 2012, again a further increment to Ksh. 119,788,989.

The test for normality carried out were Kolmogorov-Smirnov (KS) and Shapiro-Wilk (SW). The analysis of the Smirnoff Kolmogorov test indicated that the value for ROE was 0.237, the value for sales was 0.179 and the value for EPS was 0.231. Analysis of the Shapiro Wilk test indicated that the value for ROE was 0.479, the value for sales was 0.734 and the value for EPS was 0.314. These values were not significant as (P>0.05) thus implying that the data was normally distributed.

From the regression analysis, the adjusted R squared value shows the variance level in the outcome variable (y) that can be explained by variations in the independent variables (x). The adjusted R squared was at 0.397 which indicates that 39.7% of changes in company performance of oil firms in Kenya are as a result of the changes in Return on Equity, Earnings per share and Sales. From the ANOVA analysis, at 95% confidence level, the results of the F critical was 1.876 and the P value was (0.482) therefore not significant. From the Coefficients Analysis, a unit change in EPS would lead to a -0.232 change in price regulation, and a unit change in sales would lead to -0.015 change in price regulation. Moreover, the study also showed that a unit change in ROE would result in -2.139 change in price regulation. No variable was significant (p> 0.05). There was a weak inverse relationship between price regulation and the 3 independent variables.
5.3 Discussion

This section of the study focused on the major findings of the study structured according to the research questions. The interpretation of the findings were also presented here and analyzed in line with the literature review.

5.3.1 Discussion on Price regulation and Return on Equity

The return on equity recorded by Total Kenya limited for the period between 2008 and 2012 generally had a downward trend. This therefore indicated that introduction of price regulation in 2010 had a negative impact on Return of Equity in Total Kenya Limited.

The findings of this study were consistent with the findings of Carranza et al, (2009) who studied the effect of price regulations on the organization and performance of gasoline market in Quebec and other parts of Canada. After running regression analysis on a set of variables that measure the endogenous structure of the market, before and after the introduction of the policy, the regression results highlighted that price regulation affected market structure and in turn had negative consequences on profitability through lower prices and higher competition.

The findings of this research were also consistent with Bator (1958), who researched on how the level and nature of competition in the industry determined the efficiency of production and delivery of products to customers, the quality of products and the degree of innovation in the sector. The results of his study were that excessive price competition indeed reduced the profitability of the company while low price competition enabled oil companies adjust prices in line with their operational strategies. The findings of this research were further consistent with the study conducted by African globe (2011) in Kenya in the year 2011. Data was collected from the major oil marketing companies in Kenya and the results showed that there was a reduction in profit margins and increased competition as a result of the official price caps. Thus causing the big oil marketing firms to leave the African market due to the significant reduction in profits.

The findings were further similar to Golec’s (2010) study that was on the effects of European pharmaceutical price regulation to firm return on equity and spending on research and
development. This was a comparative study between a price regulated market and a non-regulated market. The regression analysis results revealed how tight EU pharmaceutical price controls led to lower return on equity, lower stock returns, and reduced spending on research and development by EU firms compared to U.S. firms. The study concluded that firms whose sales are more closely related to EU real pharmaceutical prices spent less on research and development, were less profitable and earned smaller stock returns.

The findings of this study were also consistent with, Wabobwa (2011) who studied the impact of oil price regulation on financial performance of National Oil Corporation of Kenya (NOCK) by using ratios for the period before and after introduction of price regulation. His results showed that gross profit margin reduced tremendously thus shrinking the company’s gross profit after introduction of oil price regulation.

The findings of this study were also homogenous to the study carried out by Semgomba, (2013), who researched on the impact of the oil price regulation on company accounts. Lower oil price forecasts meant that oil marketing companies should expect lower future profits from an asset for example, storage facility tanks due to the impairment of assets. The results of the study further revealed that lower asset values and increased default risks meant that borrowers would face increasing challenges, including the need to pay higher interest rates or enhance security packages. This was therefore translated as putting even more strain on company profits.

However, the results of this study were not consistent with those of Armstrong et al. (2006) whose study showed that price cap regulation reduced the need for micromanaging the operations of the regulated firm. The regulatory focus was on price increases that were more transparent and less susceptible to problems of ‘information asymmetry’ than costs. Once the price cap rule was established, the firm had more flexibility to determine how to operate its business to achieve maximum efficiencies and how to structure the firm in order to achieve its commercial objectives. This in the long run became profitable to the business.
5.3.2 Discussion on Price regulation and Earnings per share

The earnings per share recorded by Total Kenya limited for the period between 2008 and 2012 generally had a downward trend. This therefore indicated that introduction of price regulation in 2010 had a negative impact on Earnings per share in Total Kenya Limited.

The findings of this study were consistent with Langenfeld et al. (1989), whose study revealed that price regulation would likely attract new entrants into the market who would be able to provide customers with an improved service for the same or lower cost, due to the homogeneity of products offered by the OMC’s. In such a case, the incentives to reduce service levels were removed because such a strategy could lead to a rapid erosion in market share due to a shift in the sales from the already existing OMC’s to the new entrants. This decrease of market share due to many new entrants would cause the major OMC’s to reduce in size. Causing a decrease in a company’s earnings per share and profitability.

The findings of this study were further consistent with Scott (2011), whose study concluded that when governments adopted a price control, it defined the market price of a product and forced all, or a large percentage of transactions to take place at that price instead of the equilibrium set through supply and demand. As supply and demand shifts constantly in responses to costs, the government’s price changed after a lengthy political process as it was never at an equilibrium, causing companies to be less profitable due to dead weight losses caused by the failure to rate consumer or producer surplus.

The findings were further consistent with what was revealed by Kilian (2008) who analyzed the impacts of the regulation of petroleum prices on the financial performance of Total South Africa Limited. He observed that there was significant negative impact in the financial performance of the company for three years after introduction of price regulation. He used ratio analysis to measure the performance three years before and after introduction of price caps.

The findings of this study were also similar to Ombungu (2011), whose study showed that price caps were introduced to protect the consumer but evidence also showed that this may in turn lower or eat into the profits of the supplier. When pricing as a marketing strategy was controlled, firms had to look for other competitive strategies in order to survive the market.
It is with this that the oil marketers had to adjust their operations to fit into the market ensuring that they continue to remain as profitable as possible.

The findings of this study were also consistent with Pirog (2012), whose study revealed that excessive regulations might have increased the cost of intermediation and in turn reduce the profitability of OMCs. Price regulations used parameters which were historical in nature and forecasted averages which distorted the true cost of the product leading to losses. Petroleum price regulation had a direct bearing on gross revenues of oil companies as it determined the price at which the oil companies sold their products and was therefore expected to ultimately affect financial performance.

The findings of this study were however, inconsistent with the findings of Dalen et al., (2006) who studied the effects of price regulation on generic competition in pharmaceutical market in Norway. The study established a structural model that enabled examination of the impact of the price regulation on both demand and market power. The results of the study suggested that the price caps helped to increase the market shares of generic drugs and succeeded in triggering profitability.

The findings of this study were further inconsistent with Sappington et al, (2010) who studied the impact of price cap regulation on productivity growth in the US telecommunications industry between 1988 and 1998. The study revealed a pronounced positive effect of price cap regulation on growth. Of the 24 out of 25 firms in the sample, these firms experienced an increase in the mean of technological change and 23 out of the 25 firms sampled, experienced an increase in annual productivity growth following the implementation of regulation which in turn translates to higher profits. In her study of exchange markets in the US between 1991 and 2002. Eckenrod (2006), also corroborated that price cap regulation was associated with higher earnings per share for regulated suppliers.

5.3.3 Discussion on Price regulation and Sales

The Sales recorded by Total Kenya limited for the period between 2008 and 2012 generally had an upward trend. This therefore indicated that introduction of price regulation in 2010 had a positive impact on the sales in Total Kenya Limited.
The findings of this study were consistent with Mwangi (2013) who studied the positioning strategies in the insurance industry and identified various elements that could be used by the companies to competitively position themselves in the industry. She identified price as a major element where firms could choose to be market leaders in terms of price, or use pricing to communicate a higher brand and product value. She acknowledged that even though price was highly regulated companies still managed to underprice their products in order to beat competition thus increasing their sales volumes.

The findings of this study were consistent with Marucha (2012), who concluded that firms used their core competencies to achieve competitive advantage in markets where price was regulated. As such the firms continually identified and strengthened their core competencies in order to sustain competitive advantage, and thus despite price regulation, if the core competencies were correctly used, revenues would show an upward trend.

The findings of the study were further consistent with Balaghar (2012) study who evaluated all the promotional elements that an organization could use to increase sales volumes. He identified discounted prices as one way of increasing the sales volumes. He also identified alternative promotional tools such as advertising, flexible payment terms, public relations, direct selling and direct marketing. He concluded that the main reason for implementing the sales promotion elements was to increase sales and in turn profits as well. The findings of this study were also consistent with what was revealed by Richards and Peterson (2005) in their study whereby they acknowledged price as a major factor in influencing sales, and proposed price discrimination when promoting sales on short term basis.

The findings were also consistent with what was revealed by Ireri (2011), the major oil companies had managed to maintain their status through acquisitions and mergers. For example, in 2006 Kenya Shell acquired the Shareholding of BP in Kenya increasing its market share. Oil Libya acquired Exxon Mobil shareholding in Kenya in 2007. In 2008, Total Kenya acquired all the assets of Chevron in Kenya. Other mergers were those of Kenya Oil Company Limited (Kenol) which merged with Kobil to form Kenol/Kobil Ltd. This was evidenced by the growth of sales in Total Kenya after the acquisition of Chevron assets and continued to grow its sales even after price cap regulation introduction.
The findings were also consistent with what revealed by Mweru (2014), in the insurance industry, whereby most products had little differentiators even at value addition. All companies had almost similar distribution channels and product awareness strategies both of which had already been over-exploited. However, companies still had to make sales for them to remain relevant in that particular industry. This left marketers with only one major variable which they could use to attract more sales i.e. Price. There results of the study showed that there existed an inverse relationship between price and sales volumes, holding all other factors constant. The higher the price the lower the volumes of sales, and the lower the price the higher the sales volumes.

The findings of this study were however, inconsistent with Parkinson (2010), who in his study of sales volumes variances identified various challenges that came with sales volumes that are either higher than or lower than the planned sales, especially in a standardized price scenario. He concluded that these variances disorganized the budgets set by organizations, especially because of the contribution margins that ended up not delivering to the budgeted profits.

5.4 Conclusion

This section details the major conclusions drawn from the research findings on the basis of the three research questions.

5.4.1 Conclusion on Price regulation and Return on Equity

The study findings revealed that the re-introduction of oil price regulation had a negative impact on return on equity of Total Kenya Limited. The company performance as measured by EPS was better/ higher in the period preceding price regulation. Thus a negative effect on company performance.

5.4.2 Conclusion on Price regulation and Earning per share

The study findings revealed that the re-introduction of oil price regulation had a negative impact on the earnings per share of Total Kenya Limited. The company performance as
measured by EPS and ROE was better/ higher in the period preceding price regulation. Thus a negative effect on company performance.

5.4.3 Conclusion on Price regulation and Sales growth

The study findings revealed that the re-introduction of oil price regulation had a positive impact on sales after the re-introduction of price regulation in the petroleum industry. The company performance as measured by sales was lower in the period preceding price regulation. Thus a positive effect on company performance using this variable.

5.5 Recommendations

This section presents recommendations for the company and improvement for further studies.

5.5.1 Recommendations for Improvement

The Ministry of Energy controls key sector players in the supply chain of Kenya and regulatory institutions, like ERC. OMCs should consult further to improve the suitability and applicability of ERC formula in order to protect profitability of the sector. The formula has been criticized as not capturing all elements of supply chain such as financing costs for imports, depot costs and demurrage.

5.5.1.1 Recommendations for Return on equity

Total Kenya should look for ways to further decrease their finance costs as these are heavily eating into their company profits. They should look into hedging to curb the rampant interest and inflation rates of the Kenyan economy. This would also cater to the foreign exchange losses experienced especially when loans are settled at exchange rates that are way higher than when the loan was borrowed. The company should also try and reduce their direct costs. If this is done, the company’s profitability will improve despite the regulation which will translate into higher return on equity.
5.5.1.2 Recommendations for Earnings per share

Total Kenya should look for ways to further decrease their finance costs as these are heavily eating into their company profits. They should look into hedging to curb the rampant interest and inflation rates of the economy. This would also cater to the foreign exchange losses experienced especially when loans are settled at exchange rates that are way higher than when the loan was picked. The company should also try and reduce their direct costs. If this is done, the company’s profitability will improve despite the regulation which will translate into higher earnings per share.

5.5.1.3 Recommendations for Sales

In this case study, sales have increased after the re-introduction of price regulation into the industry in 2010. Total Kenya should strive to operate more efficiently by minimizing their operating expenditures so that an increase in Sales would be automatically translate to an increase in profitability (measured in terms of ROE and EPS). The company should therefore strive to continue to grow their sales as per the trend for the 5 years analyzed as this will eventually translate into higher profits in the long run.

5.5.2 Recommendations for Further Studies

This study recommends that a study to be carried out to determine the relationship between international oil prices and local pump prices. This is because the local pump prices that are regulated by the ERC are based on the international oil prices.

This study also recommends that a study be done of whether or not price regulation has served the purpose of consumer protection that it had been initially set out to do.

This study further recommends that a study be done on the various strategies that oil firms have undertaken in order to serve customers better since the oil sector offers standardized. These strategies should be able to further grow the profitability and market shares of the oil companies.
This study also recommends an in-depth research into the effects the price controls has had on the various oil companies’ market share and growth to determine which companies have been successful in coping with the introduction of the price control.
REFERENCES


Implications of Price Regulation on Market Structure of Oil Marketing Firms in Kenya

Wycliffe Kipkorir Langat a*, Emanuel Manyasa b (2012).


Kilian, L. (2006). Not all oil price shocks are alike: Disentangling demand and supply shocks in the crude oil market.


Marr, B. (2012). *Key Performance Indicators (KPI): The 75 measures every manager needs to know.* Pearson UK.


Rakesh Sharma. OPEC Vs the U.S. “Who controls oil prices.” 2015


The East African, (Saturday, August 3, 2013). *Acquisition and merger deals sweep Kenya oil industry*.


Total Kenya Published statements 2008 to 2012.

Ventures Africa magazine, Jan 21, 2015. “African countries that have slashed fuel prices.”


APPENDICES

Appendix I: REQUEST LETTER FROM U.S.I.U TO COLLECT INFORMATION FROM TOTAL KENYA LIMITED

Stella Nkatha Kimathi,
P. O. Box 9518 00100,
Nairobi.

To whom it may concern,

RE: REQUEST FOR DATA COLLECTION

My name is Stella Nkatha Kimathi currently pursuing a Master’s degree in Business Administration (MBA), Finance option at the United States international university-Africa. Towards the partial fulfilment of my degree, I am undertaking a research project on *Effects of Price regulation on company Performance of oil marketing companies in Kenya: Case of Total Kenya Limited*. Your company has been selected for data collection being that it has the largest market share in the Oil industry hence you would be in a good position in enabling this study achieves its objectives.

My supervisor and I would like to appreciate your assistance in enabling me collect data from your organization. The results of the report will be used solely for academic purposes and will be availed to your company on request.

Yours sincerely,

*Stella Nkatha Kimathi.*
Appendix II: DATA TABULATION GUIDE USING EXTRACTS OF FINANCIAL STATEMENTS

Introduction

This appendix will be used to evaluate the company performance for our target population. This will be Total Kenya financial statements for the period between 2008 to 2012, two years prior and two years after price regulation was re-introduced into the Kenyan market in 2010.

<table>
<thead>
<tr>
<th>Year</th>
<th>Return on Equity</th>
<th>Earnings per share</th>
<th>Sales (KES)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>14.03%</td>
<td>4.02</td>
<td>54,807,521.00</td>
</tr>
<tr>
<td>2009</td>
<td>5.38%</td>
<td>1.62</td>
<td>41,311,598.00</td>
</tr>
<tr>
<td>2010</td>
<td>9.56%</td>
<td>0.2</td>
<td>79,206,640.00</td>
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<tr>
<td>2011</td>
<td>-0.78%</td>
<td>-2.08</td>
<td>105,590,360.00</td>
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<tr>
<td>2012</td>
<td>-23.65%</td>
<td>-0.32</td>
<td>119,788,989.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>Net profit (KES)</th>
<th>Shareholders’ equity (KES)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>703,894.00</td>
<td>5,017,822.00</td>
</tr>
<tr>
<td>2009</td>
<td>482,585.00</td>
<td>5,962,191.00</td>
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<tr>
<td>2010</td>
<td>916,208.00</td>
<td>9,579,853.00</td>
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<tr>
<td>2011</td>
<td>(71,436.00)</td>
<td>9,194,818.00</td>
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<tr>
<td>2012</td>
<td>(202,142.00)</td>
<td>854,765.00</td>
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</tbody>
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